

Cooper, Donal / Leino, Marika (eds)

**Depth of Field**  
Relief Sculpture in Renaissance Italy

Peter Lang

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FRANÇOIS QUIVIGER

## 6. Relief is in the Mind: Observations on Renaissance Low Relief Sculpture

This paper explores how Renaissance low relief sculpture prompted its audience to shift from a purely visual perception of its subject to a multi-sensory visualisation encompassing touch and sound as well as vision. The main problem inherent to the study of sensory perception in this period is the considerable gap between Renaissance theories—mostly based on antique and medieval sources—and modern science. While it may seem anachronistic to apply present-day perception theory to Renaissance imagery, it is also implausible to argue that Renaissance bodies and minds behaved according to ideas and theories which are, for the most part, now dismissed as fanciful. Furthermore, modern science tends to assume that human sensory equipment, in evolutionary terms, has essentially remained constant throughout the historical past, implying that any differences between ancient, medieval, early modern, and modern sensory perception are the product of culture rather than nature. As we shall see in the case of touch, modern neuro-science presents a far more detailed and refined understanding of the tactile map of the human body than early modern theories could hope to achieve.

In the following paper Renaissance and modern concepts of tactility provide the basis for a reassessment of religious and literary ideas on relief, their sculptural representation, and their intended impact on the Renaissance viewer. The essay is divided into four parts. The first focuses on early modern and modern concepts of tactility. The second analyses the use of the word *rilievo* in secular literature to shed new light on the relevance of relief for the visualisation of the human figure. The third section relates the multi-sensory visualisation of sacred figures—mostly images of the *Virgin and Child*—to late medieval and Renaissance meditative practices. The fourth and final part of the paper applies the preceding discussion to two specific examples of

Renaissance low relief sculpture, the *Dead Christ Supported by Angels* (c.1435–1443; plate 14) attributed to Donatello and his workshop, and Agostino di Duccio's *Virgin and Child* (c.1465–1468; plate 29), both in the Victoria and Albert Museum. In their historical context the various devices used by Donatello and Agostino to stimulate their audience's perception of volume and space can be understood as aids to multi-sensory visualisation. From a broader point of view they remain as witnesses, if not fossils, of tactile perceptions and imaginations from the Renaissance.

## Scientific Definitions

There is no such thing as a specifically Renaissance conception of touch. Up to the seventeenth century, most Europeans believed that their capacity for thought and perception followed a basically medieval theory merging Aristotelian faculty psychology with Galen's brain anatomy. Thus early modern scientific definitions of touch followed Aristotle's treatise *On the Soul* which located the organ of touch under the skin and compared tactile sensation to the perception of blows through the intermediary of a shield. The thirteenth-century *Treatise on the Five Human Senses* by Aldobrandino da Siena (d. 1287) provides a clear account of this common idea.<sup>1</sup> According to Aldobrandino the organ of touch is a nerve that perceives the tangible, which has its root in the brain, passing through the marrow of the spinal cord from where it spreads its net to all parts of the body. Thus, while touch is frequently associated with and represented by the hand, it also encompasses an awareness of the entire body.<sup>2</sup>

- 1 See Aldobrandino da Siena, *Trattato dei cinque sensi dell'uomo con altre scritture del buon secolo della lingua*, ed. G. Manuzzi, Florence 1872, pp.4–5; for later renditions of the same theme see, for example, G. Reisch, *Margarita philosophica*, trans. G.P. Gallucci, Venice 1600, p.612 (first Latin edition, Freiburg 1503).
- 2 *Ibid.*, p.6: 'Nelle mani e in tutti gli altri membri è disposto il toccare [...]' ('In the hands and other limbs is arranged the [sense of] touch').

Figures in relief or sculpted figures are of course primarily visual entities, but they also possess tangibility, either real or imagined by the viewer. Indeed for the Renaissance, as much as for modern science, there was no such thing as purely visual or tactile perceptions. Each sense had its own object, in Aristotle's words: '[...] colour is the special object of sight, sound of hearing, flavour of taste. Touch, indeed, discriminates more than one set of different qualities'.<sup>3</sup> Perception relied on what Aristotle and his followers called 'common sensibles'—mental images combining multiple sensory perceptions—which Aristotle defined as '[...] movement, rest, number, figure, and magnitude; they are not peculiar to any specific sense, but are common to all'.<sup>4</sup> These were precisely the elements which Renaissance artists used to compose human figures, and which in turn fed the visualising exercises of their audience within the contemporary conventions of religious art and devotional practice.<sup>5</sup>

Cultural historians have begun to discuss the importance of tactility, but without much regard for modern scientific research.<sup>6</sup> A brief examination of the range of tactile perceptions defined by twentieth-century sensory physiology may serve to demonstrate the extent to which modern science has refined, subdivided and mapped earlier categories of tactile perception.

The modern sense of touch encompasses a variety of perceptions, now classified as general somatic sensations, that is, sensations pertaining to the body. To quote from a late twentieth-century medical textbook the somatosensory system comprises:

3 Aristotle, *De Anima*, trans. R. McKeon, New York 1941, p.567 (418a).

4 Ibid.

5 On the role of the artists as 'visualiser' see M. Baxandall, *Painting and Experience in Fifteenth-century Italy: A Primer in the Social History of Pictorial Style*, Oxford 1972, p.45.

6 Except psychoanalysis which, unlike physiology or cognitive science, has been used as a powerful tool in literary studies; for cultural studies on touch see Elizabeth Harvey's introduction to *Sensible Flesh: On Touch in Early Modern Culture*, ed. E. Harvey, Philadelphia 2002, pp.1–15; C. Benthien, *Flesh*, New York 2002; and M. O'Rourke Boyle, *Senses of Touch: Human Dignity and Deformity from Michelangelo to Calvin*, Leiden 1998.

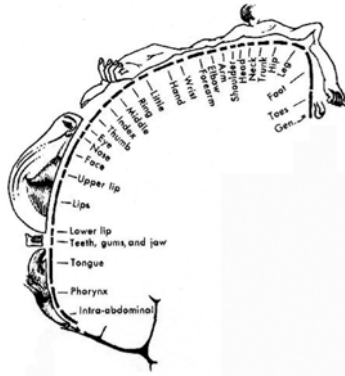


FIG. 42: Sensory homunculus, after W. Penfield, T. Rasmussen, *The Cerebral Cortex of Man*, New York 1950, p.44. fig. 7.

all the receptors in the skin, the joints and the skeletal muscles with their tendons [...] superficial sensibility is mediated by receptors located in the skin, and deep sensibility by those in the underlying muscles, tendons and joints.<sup>7</sup>

Somatic sensations can be subdivided into four categories: mechanoreception, or skin surface sensation; proprioception, the inner image of one's own body and the positions of one's limbs (muscle control and movement depends on this sense); thermoreception, the perception of temperature; and nociception, the perception of pain. Furthermore, we now know that the tactile map of the body differs from its visual appearance: tactile receptors are principally concentrated on the hands, feet and mouth area as well as the torso (fig. 42). This disjuncture between the tactile and visual order should encourage us to look again at the pictorial treatment of the human figure and the ways in which artists in different cultures have depicted these zones of high sensitivity as zones of perceptivity, interaction, and meaning. As we shall see, the plastic range of Renaissance low relief sculpture offers an ideal field of investigation.

7 R.F. Schmidt and H. Altner, *Fundamentals of Sensory Physiology*, Berlin and New York 1986, p.29.

Renaissance men did not have words for these modern categories but their understanding of the sense of touch encompassed internal and external perceptions, a duality articulated in Aldobrandino da Siena's treatise.<sup>8</sup> Such an awareness can also be observed in how the five senses were later represented as allegorical figures.<sup>9</sup> Martin de Vos's engraving of the *Allegory of Touch* (fig. 43), printed in Antwerp in 1575, provides an eloquent example. In the foreground the main figure feels two extremes of tactition through her hands.<sup>10</sup> Her right hand experiences the soft contact of a spider's web, while her left awaits the bite of a bird which already clinches her thumb with its claws, a reminder that touch was often expressed visually by means of touching hands and of touching and touched figures. In the background, to the left, an angel expels Adam and Eve from Paradise towards a life of nociception (i.e. of pain, see Genesis 3: 19); on the other side St Peter experiences proprioceptive disorders as he loses his balance during his attempt to walk on water.<sup>11</sup> While the tradition of representing the five senses as allegories is a sixteenth-century phenomenon with only a handful of medieval antecedents, its source lies in earlier imagery where sensation

8 See above fn.2.

9 On the history of this tradition see C. Nordenfalk, 'Les cinq sens dans l'art du moyen âge', *La Revue de l'Art*, XXXIV, 1976, pp.17–28; *idem*, 'The Five Senses in Late Medieval and Renaissance Art', *Journal of the Warburg and Courtauld Institutes*, XLVIII, 1985, pp.1–22; and *Immagini del sentire: i cinque sensi nell'arte* (exhibition catalogue, Centro Culturale di Santa Maria della Pietà, Cremona, 21 September 1996–12 January 1997) ed. S. Ferino-Pagden, Milan 1996.

10 On the tradition of representing the five senses by their organs see Nordenfalk, 'The Five Senses' (as in fn.9), pp.4–7.

11 These are self-quotations by de Vos of two of his own paintings, see A. Zweite, *Marten de Vos als Maler: Ein Beitrag zur Geschichte der Antwerpener Malerei in der zweiten Hälfte des 16. Jahrhunderts*, Berlin 1980, pls 44 and 89. As far as sensation is concerned this may well be a loss of balance, in other words a disruption of equilibrioception, the sensory system that provides the dominant input about our movement and orientation in space. In modern physiology it is usually treated under the heading of hearing since its organ is located in the vestibulum of the inner ear together with the auditory organ.



FIG. 43: Martin de Vos, Adrian Collaert, *The Sense of Touch*, engraving, Antwerp 1575, London, private collection.

is part of the narrative, rather than its explicit subject.<sup>12</sup> Martin de Vos's print deploys religious subjects to illustrate the individual senses, while the main allegorical figure echoes the theme of the pecking goldfinch that the Child Christ often holds in medieval painting.<sup>13</sup>

12 See L. Konečný, 'I cinque sensi da Aristotele a Costanti Brancusi', in Ferino-Pagden (as in fn.9), pp.23–48 (at p.28).

13 On this theme see H. Friedman, *The Symbolic Goldfinch, its History and Significance in European Devotional Art*, Washington 1946, pp.110–13 and related plates. The famous series of the five senses completed in 1617 by Rubens, Jan Francken and Jan Brueghel for the Duke of Pfalzneuburg (now in the Prado) provides further examples of sensory iconography by illustrating each sense through a gallery of related paintings; see *David Teniers, Jan Brueghel y los gabinetes de pinturas* (exhibition catalogue, Museo Nacional del Prado, Madrid, 2 February–2 May 1992), eds M. Diaz Pardon and M. Royo-Villanova, Madrid 1992, pp.130–3.

## Relief as a Word

We might therefore expect the concept of relief in Renaissance art and literature to carry at least some of these associations. According to Luba Freedman, the Italian word *rilievo* originated in the oral and vernacular universe of the workshop; it initially referred to the illusion of three dimensions in painting through the use of light and shade.<sup>14</sup> Later it came to mean projection from the pictorial plane. The accompanying adjectives *mezzo* or *basso* designated specific types of half or low relief. This still forms the basis of our present-day understanding of relief in the plastic arts. The *Oxford English Dictionary* defines relief as ‘the elevation or projection of a design, or parts of a design, from a plane surface in order to give a natural and solid appearance; also, the degree of such projection; the part which so projects’.<sup>15</sup>

A basic search of over one thousand Italian literary texts on the electronic *Letteratura Italiana Zanichelli* reveals that the word *rilievo* also circulated in the medieval world of letters.<sup>16</sup> *Rilievo* could allude to a soothing sensation, or to the variety of flavours in a meal,<sup>17</sup> but in a few early instances it also described the visual appearance of areas of high tactile sensitivity on the human body, in particular lips and nipples. This sensuous understanding of *rilievo* can be found in some of the many descriptions of female beauty in Boccaccio’s *Comedia delle ninfe fiorentine*. The *Comedia* narrates the initiation to love and virtue of the shepherd Ameto through his infatuation with the nymph Lia whose fleshy lips are characterised by a gracious—‘grazioso’—*rilievo*. In the twelfth book of the *Comedia*, Boccaccio traced Ameto’s amorous gaze through a comprehensive head-to-toe scrutiny of Lia’s body. The

14 L. Freedman, ‘Rilievo as an Artistic Term in Renaissance Art Theory’, *Rinascimento*, XXXIX, 1989, pp.217–47.

15 *Oxford English Dictionary*, online edition (based on text of 1989 second edition).

16 See *Letteratura Italiana Zanichelli CD-ROM dei testi della letteratura italiana*, eds P. Stoppelli and E. Picchi, Bologna 1995.

17 Bono Giamboni, *Il libro de’ vizi e delle virtù: e il trattato di virtù e di vizi*, ed. C. Segre, Turin 1968, p.33; see also *Il novellino*, ed. G. Favati, Genoa 1970, p.261.



description echoes a common European ideal of feminine beauty;<sup>18</sup> relief and parts in relief—‘parte rilievate’—prompt Ameto to switch from physical to intellectual sight:

And after having observed the uncovered parts with subtle prudence, he disposes those that are covered more with the intellect than with the [physical] eye. [...] Under the neckline he discerns the parts *in relief* in little peaks and with his mental eye passes under the cloths and sees with delight what is causing such *relief*, feeling it not less sweet than they really are (my italics).<sup>19</sup>

This specific use of *rilievo* features elsewhere in the *Comedia* as well as in the *Rime* of Boccaccio’s contemporary, the Florentine poet Antonio Pucci (c.1310–1388):

And the charming and small breasts appear on the folds *in relief*, nothing superfluous, but just as much as is required by their shape and clearly one sees and recognises that they produce this relief by means of their hardness [...] (my italics).<sup>20</sup>

Thus *rilievo*, however tactile, is contemplated by the eye of the intellect. For both Pucci and Boccaccio it acted as a visual sign which prompts the viewer to switch from an optical perception to an imaginative, tactile anticipation. This mode of imagining parallels the way in which artists

18 See E. Cropper, ‘On Beautiful Women, Parmigianino, Petrarchismo, and the Vernacular’, *Art Bulletin*, LVIII, 1976, pp.374–94 (at p.386).

19 Giovanni Boccaccio, *Opere minori in volgare*, ed. M. Marti, 4 vols, Milan, 1969–1972, III, 1971, p.48: ‘E poi ch’egli con sottili avvedimenti ha le scoperte parti guardate, alle coperte più lo ’ntelletto che l’occhio dispone. Egli non guari di sotto la scollatura discerne le rilevate parti in picciola altezza e con l’occhio mentale trapassa dentro a’ vestimenti e con diletto vede chi di quello rilievo porga cagione, non meno dolci sentendole ch’elle siano’. The rest of the passage focuses on the covered body of the nymph. See also the passage in Book 9 of the *Comedia delle ninfe*, in *Opere minori*, p.39: ‘E rimirando sopra i nascondenti vestiti avvisa dove perverrebbe la pronta mano, se data le fosse licenzia, e loda le rilevate parti in aguta e tonda forma mostrate dalli strigenti drappi’.

20 For Pucci’s text see *Rimatori del Trecento*, ed. G. Corsi, Turin 1969, p.848: ‘E le vezzose e piccole mammelle / appaion sopra i panni rilevate, / non soperchio, pensate, / ma quanto a la lor forma si richiede, / e chiaramente si conosce e vede / che quel rilievo per durezza fanno [...]’

were trained to conceive, compose, and represent the human figure from the bones outwards, through muscles, nerves, skin and drapery.<sup>21</sup> It also echoed the most important mental discipline of the late medieval and Renaissance imagination: the art of religious meditation.<sup>22</sup>

## Religious Relief

The imaginative exercises of Boccaccio's shepherd seem to involve the same parts of the brain as those activated by late medieval religious literature which, from the twelfth century onwards, disseminated imaginative retellings of the life of Christ with a wealth of apocryphal detail to supplement the succinct accounts found in the Gospels. While the Passion inspired a mental imagery of extreme violence rarely followed by Italian art, scenes of the Infancy of Christ frequently instructed the viewer to imagine much gentler tactile interactions with the Child. To quote from the most popular devotional handbook of the period, the *Meditations on the Life of Christ*:

Kiss the beautiful little feet of the Infant Jesus who lies in the manger and beg His mother to offer to let you hold Him a while. Pick Him up and hold Him in your arms. Gaze on His face with devotion and reverently kiss Him and delight in Him. You may freely do this [...] His benignity will patiently let Himself be touched by you as you wish and will not attribute it to presumption but to great love.<sup>23</sup>

- 21 See Leon Battista Alberti, *On Painting and On Sculpture: The Latin Texts of De Pictura and De Statua*, ed. and trans. C. Grayson, London 1972, pp.74–5: 'pingendis primum ossa [...] tum oportet nervos et musculos suis locis inhaerere, denique extremum carne et cute ossa et musculos vestitos reddere' ('first sketch in the bone [...] then add the sinews and muscles, and finally clothe the bones and muscles with flesh and skin').
- 22 See F. Quiviger, 'Imagining and Composing Stories in the Renaissance', in *Pictorial Composition from Medieval to Modern Art*, eds P. Taylor and F. Quiviger, London 2000, pp.45–57 (at p.46).
- 23 Pseudo-Bonaventure, *Meditations on the Life of Christ: An Illustrated Manuscript of the Fourteenth Century*, ed. I. Ragusa, Princeton 1961, pp.38–9.

The fourteenth-century vernacular compilation of Franciscan legends known as the *Fioretti* or *Little Flowers of St Francis* applies this advice to the description of a vision in which the Franciscan Blessed, Conrad of Offida, holds the Christ Child in his lap:

[Brother Conrad] taking Him [the Christ child] most devoutly, embracing and kissing Him and clasping Him to his chest, was wholly melted and dissolved in divine and indescribable love.<sup>24</sup>

As Christiane Klapisch-Zuber's study of Christ Child dolls in Renaissance Florence has demonstrated, these intimate, imaginative interactions were also practised by the laity in the domestic sphere.<sup>25</sup> Indeed the practice of imagining the Child's relief is echoed in countless painted and sculpted images of the *Madonna and Child* and generated an iconography which relied on tactile signs: images that were not necessarily three-dimensional, but nevertheless forced the mental reconstruction of volume. Their origins are to be found in the Byzantine type of the Tender Mother (the *Glykophilousa*), which developed in the centuries following the iconoclastic controversies of the ninth century.<sup>26</sup> As scholars have shown, the shifts in art and theology prompted by the victory of the iconophiles led to a humanisation of Christian sacred figures and eventually inspired Italian artists of the late Middle Ages to elaborate and depict numerous and diverse modes of interactions between the Virgin and Child—a tendency particularly evident in the work of Siene

- 24 *Fioretti di Sancto Francesco*, ed. G.L. Passerini, Città di Castello 1908, p.156: 'Il quale Egli ricevendo divotissimamente e abbracciandolo e baciandolo et istrignendoselo al petto, tutto si struggeva e risolveva in amore divino e inesplicabile' (author's English translation). The scene is inspired from the legend of the high priest Symeon, on which see H. Maguire, 'The Iconography of Symeon with the Christ Child in Byzantine Art', *Dumbarton Oaks Papers*, XXXIV, 1980/1981, pp.261–9.
- 25 See C. Klapisch-Zuber, 'Holy Dolls: Play and Piety in Florence in the Quattrocento', in *Looking at Italian Renaissance Sculpture*, ed. S. Blake McHam, Cambridge 1998, pp.111–27 (at p.121).
- 26 See L. Réau, *Iconographie de l'art chrétien*, 8 vols, Paris, 1955–1959, II, 1957, pp.73, 95; for the Byzantine emergence of Mary's motherhood from the ninth century onwards see I. Kalavrezou, 'Images of the Mother: When the Virgin Mary became *Meter Theou*', *Dumbarton Oaks Papers*, XLIV, 1990, pp.165–72.



FIG. 44: Magdalene Master, *Virgin and Child*, tempera and gilding on panel, c.1260–1270; Gemäldegalerie, Berlin (inv. 1663).

painters of the fourteenth century.<sup>27</sup> The rise of relief as an essential part of painting would seem to follow this broad trend. We find it already in Cennino Cennini's *Libro dell'arte* and it was developed later by Leonardo and his followers through the sophisticated pictorial treatment of colour, light and shadows.<sup>28</sup> While methods of representation underwent dramatic changes over the course of the Renaissance, in the case of the *Virgin and Child*, the same tactile iconographic themes remained.

27 See J. Stubblebine, 'Byzantine Influence in Thirteenth-century Italian Panel Painting', *Dumbarton Oaks Papers*, XX, 1966, pp.85–101; on the iconography of the Virgin see V. Lasareff, 'Studies in the Iconography of the Virgin', *Art Bulletin*, XX, 1938, pp.26–65.

28 The theme of relief in painting is amply studied. For a concise summary of the main sources see L. Grassi and M. Pepe, *Dizionario della critica d'arte*, 2 vols, Turin 1978, II, pp.480–1; Freedman (as in fn.14), pp.221–31. On Leonardo see John Shearman's seminal article 'Leonardo's Colour and Chiaroscuro', *Zeitschrift für Kunstgeschichte*, XXV, 1962, pp.13–47, subsequently developed by C. Farago, 'Leonardo's Color and Chiaroscuro Reconsidered', *Art Bulletin*, LXXIII, 1991, pp.63–88.



FIG. 45: Raphael, *Virgin and Child*, oil on panel, c.1502; Gemäldegalerie, Berlin (inv. 141).



FIG. 46: Pompeo Batoni, *Holy Family*, oil on canvas, c.1774 (detail); Museo Capitolino, Rome (inv. 359).

Allegories of touch alert us to the fact that Renaissance artists usually represented tactility through figures experiencing touch. Modern sensory physiology reminds us that the fingertips, the mouth and the feet are the zones of highest tactile receptivity. The most frequent example of tactile iconography is the theme, or rather the sub-theme, of the Madonna touching, holding, and sometimes pressing the foot of the Christ Child. It represents the simplest perception of relief: the hand experiencing volume.<sup>29</sup> The motif is used consistently as a pictorial sign throughout 500 years of Christian iconography from the Middle Ages, through the Renaissance, into the Baroque, a remarkable continuity which I illustrate here through three chronologically disparate examples by the anonymous Magdalene Master (c.1260–1270, fig. 44), Raphael (c.1502, fig. 45, both Gemäldegalerie, Berlin) and Pompeo Batoni (c.1774, fig. 46, Museo Capitolino, Rome). The left hand of Magdalene Master's Madonna touches the Child's foot in three places: the tip of the toe, the heel, and the base of the ankle (fig. 44, plate 6). Her right hand, touched by the Child's fist, adopts a curved shape which suggests the volume of the Child's leg. Raphael's Perugino-esque Madonna (fig. 45) touches the inside of the Christ Child's foot with her left hand while contemplating a prayer book. Her mind is absorbed both by this devotional exercise of reading and by the continuous sensation of holding the Child's foot. Pompeo Batoni's *Holy Family* (fig. 46) shows multiple tactile sensations: the Child's foot rests partly on the silky shroud, and partly on the Virgin's palm, her middle and ring finger touch the side of His big toe and her thumb caresses the tip of His other toes. These iconographic variations are conspicuous in Tuscan paintings and sculptures executed during the decades surrounding the rebirth of low relief sculpture.<sup>30</sup> One thinks of Masolino's *Carneseccchi Madonna* (1423, Bremen Kunsthalle), Fra Angelico's *Madonna of*

- 29 On this motif which appears in Byzantine art from the twelfth century see R. Corrie, 'Coppo di Marcovaldo's *Madonna Del Bordone* and the Meaning of the Bare-Legged Christ Child in Siena and the East', *Gesta*, XXXV, 1996, pp.43–65 (esp. p.51 and notes).
- 30 The invention is unlikely to be by Masaccio as suggested by G. Dalli Regoli, 'Le mani e gli affetti: addenda', in *Scritti di storia dell'arte in onore di Sylvie Béguin*, eds M. Di Giampaolo, E. Saccomani, M. Gregori, Naples 2001, pp.47–52.

*Humility* of c. 1420 in Pisa (Museo Nazionale di San Matteo), or Martino di Bartolommeo's and Giovanni da Napoli's *Madonna and Child* of 1403 (also in Pisa), where (as in Martin de Vos's *Allegory of Touch*) a goldfinch presses its claw on the hand of the smiling Child.<sup>31</sup>

## Donatello and Agostino di Duccio

The tactility of the Madonna and Child iconography was particularly suited to low relief sculpture, which combined the plastic qualities of sculpture and the optical character of painting to create an effect similar to Bernard Berenson's famous characterisation of 'tactile values' in Tuscan painting.<sup>32</sup> Images in low relief existed in the minor arts before the fifteenth century but Donatello, who is generally credited for the rebirth of the medium, is probably the first to have treated low relief in a pictorial manner. Unlike coins, medals and plaquettes, low relief images were not meant to be handled or kissed.<sup>33</sup> They were intended to stimulate the imagination of volume and texture through sight, rather than through tactile contact. Furthermore, we can assume that sculptures in low relief were often enlivened by lamp or candlelight when viewed indoors or at night. The play of flickering light on their subtle surfaces would have animated the figures and enhanced their volume.

Donatello generally employed three spatial ranges in his relief sculpture. The first is real relief, focused on parts treated in the round and protruding from the flat surface. The second is linear perspective defining depth of space as reconstructed by the viewer's eye and brain.

31 See fn. 13 above.

32 B. Berenson, *The Florentine Painters of the Renaissance*, New York 1896, p. 11: 'Furthermore, the stimulation of our tactile imagination awakes our consciousness of the importance of the tactile sense in our physical and mental functioning'.

33 For the relationship between sculptural relief and contemporary metalwork see G. Davies, 'The Culture of Relief in Late Medieval Tuscany', in *Depth of Field: The Place of Relief in the Time of Donatello* (exhibition catalogue, Henry Moore Institute, Leeds 23 September 2004–27 March 2005), ed. P. Curtis, Leeds 2004, pp. 8–17.

The third is optical, most evident in Donatello's use of aerial perspective to express proximity and distance by means a gradual transition from sharpness to blurriness.

Such devices are conspicuously used in the *Dead Christ Tended by Angels* in the V&A attributed to Donatello and his workshop (fig. 47, plate 14).<sup>34</sup> The contrast between the diminutive hands of the putti and the adult body of Christ serves to stress the latter's volume and weight. For example, the head of Christ, realised in higher relief, is supported by the tiny hand of the putto to the left. The putto on the right, with one hand on Christ's torso and the other on His shoulder, experiences, expresses and enhances the massive volume of Christ's lifeless body. The feathers of his wings caressing the left hand of Christ provide an additional tactile prompt comparable to De Vos's *Allegory of Touch* feeling a spider's web (fig. 43). Donatello further reinforces the viewer's sense of space through the open mouths of the putti—for it is impossible to conceive of sound without space. 'Sonic' space relates to the ambient air through which sound travels, as much as the inner space of the figure where it is produced and where it first resounds. The mouths of the right hand putto and the two angels in *schacciato* on the far side of the frame are wide open. They introduce a sonic dimension to the image, a device which would be taken up by later artists.<sup>35</sup>

34 See J. Pope Hennessy, *Donatello Sculptor*, New York 1993, p.140.

35 For example, see R. Goffen, 'Mary's Motherhood According to Leonardo and Michelangelo', *Artibus et Historiae*, XX, 1999, pp 35–69 (at p.43). Pliny records that Polignotus of Thaso was the first who '[...] introduced showing the mouth wide open and displaying the teeth and giving expression to the countenance in place of the primitive rigidity' ('[...] sicut Polygnotus Thasius [...] instituit os adaperire, dentes ostendere, voltum ab antiquo rigore variare'); see *Pliny. Natural History, Book 33–35 (Loeb Classical Library)*, trans. H. Rackham, Cambridge, Mass. and London, 1st edn 1952, repr. 2003, pp.304–5. A history of the disappearance and renaissance of this device remains to be written. Ghiberti repeats the anecdote in his *Commentaries*, see J. von Schlosser, *Lorenzo Ghibertis Denkwürdigkeiten (I commentarii)*, 2 vols, Berlin 1912, I, p.20: 'Polignoto Tassio [...] fece apparire alle teste colla bocca aperta mostrare un poco e denti. Variò et visi della anticha rigideza'.



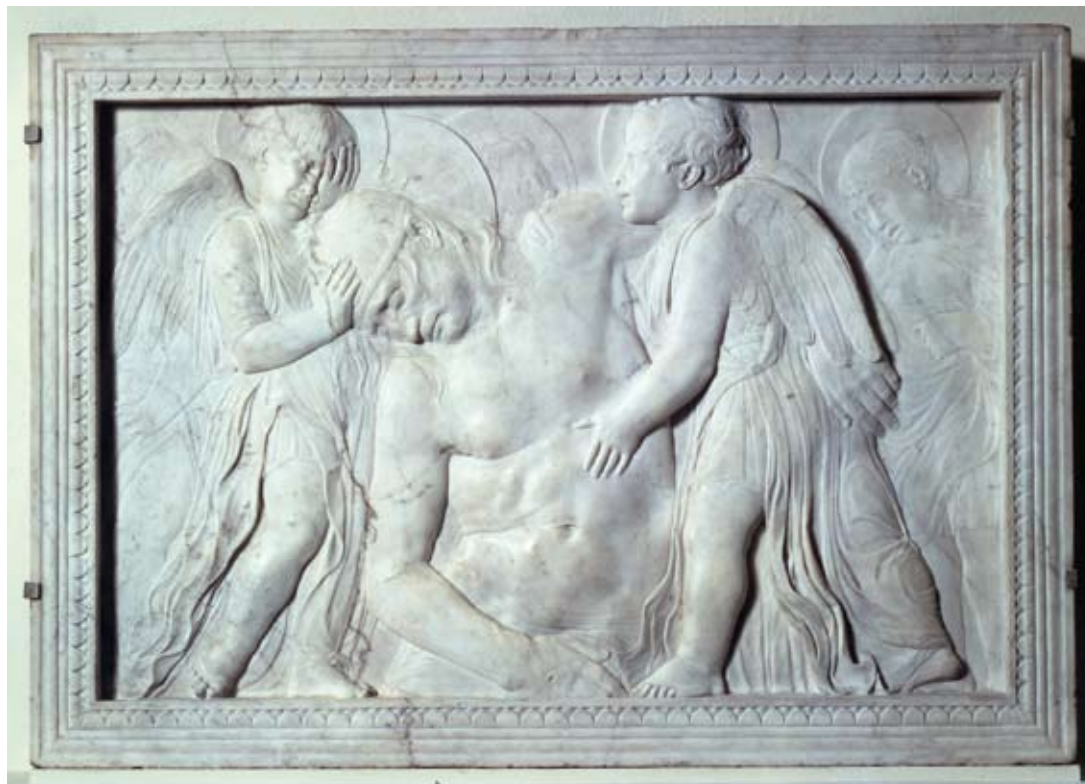


FIG. 47: Donatello and assistants(?), *Christ Tended by Angels*, marble relief; Victoria and Albert Museum, London (V&A 7577-1861).

In the relief sculptor's palette real volume is also to be observed in the treatments of the hands and face of the main figures, usually represented in the round, or at least with more relief, while the rest of the image is treated in low relief. This is the case with Donatello's exceptional *Madonna of the Clouds* (plate 8). The hands, feet and face of the Virgin as well as the left arm of the Child are in relief. Her right hand gauges the volume of the drapery that covers her and the Child. Her left hand is particularly active. Its index and middle finger press and enhance the volume of the Child's arm while her thumb caresses His left ear. In this scene, which Pope-Hennessy described as a 'strongly tactile image', the Child is pressing both His hands on the Virgin's breast which is treated in fine low relief and covered with drapery.<sup>36</sup> While such iconography relates to the image of the Virgin *lactans*,<sup>37</sup> it is not difficult, in terms of mental processes, to relate its suggestion of bodily relief under drapery to Boccaccio's secular visualisation of draped bodies.<sup>38</sup>

One of the artists who most used and developed these methods is Agostino di Duccio (1418–1481). His treatment of drapery, particularly conspicuous in his reliefs for the Tempio Malatestiano at Rimini, enhances rather than conceals the bodies of his figures. Agostino's *Madonna and Child* in the V&A, probably executed in Rimini in the 1450s, provides a remarkable summary of these methods (plate 29). While it has been pointed out that this work lacks 'the immediate, direct emotional contact between Holy Family and viewer that we find in some of the popular Madonna reliefs intended for a domestic setting',<sup>39</sup> the image rehearses most of the tactile/spatial themes discussed above, themes which are also evident in Agostino's work for the Tempio Malatestiano.<sup>40</sup>

36 Pope-Hennessy (as in fn.34), p.256.

37 On this see Lasareff (as in fn.26), p.29; M. Meiss, 'The Madonna of Humility', *Art Bulletin*, XVIII, 1936, pp.435–65.

38 See fn.19 above.

39 See Curtis (as in fn.33), p.99.

40 See E. MacLagan, 'A Relief by Agostino di Duccio', *The Burlington Magazine*, XLVIII, 1926, pp.164–7; on Agostino di Duccio at the Tempio Malatestiano, see M. Campigli, *Luce e marmo: Agostino di Duccio*, Florence 1999, and S. Kokole, *Agostino di Duccio in the Tempio Malatestiano 1449–1457: Challenges of Poetic*



FIG. 48: Agostino di Duccio, *Music*, marble relief, from the left pilaster of the Chapel of the Muses, Tempio Malatestiano, Rimini, c.1450–1457.

The drapery is treated in the very linear manner of the Tempio figures. Agostino has also represented in discrete relief the left nipple of the Child as well as the right nipple of the Virgin, following a practice visible in some figures of the Tempio such as the allegory of *Music* (fig. 48). The three-dimensional focus of the image is of course the Child's body. The curvilinear draperies mark the roundness of His limbs and even record the shape of His belly button. The fleshy parts of His body are treated in higher relief than the rest of the image. The volume of the thighs is emphasised through the roll of the flesh by means of relief and shadows, and by the fingers of the Virgin: the drapery passes between her thumb and index finger while her other three finger tips touch the side of Christ's thigh and are depicted in sufficiently high relief to project shadow over it. Five more finger tips, belonging to the angel to the left, prolong the tactile definition of the thigh initiated by the Virgin's touching hand, and lodge their extremities behind the Child's knees. Further down, the toes of the Child's left foot, protruding onto the parapet, hold the string to which the blank cartouche is attached while only the tip of the other foot touches the parapet. The Child's fingers, holding the Virgin's finger—the tip of which protrudes between his thumb and index finger—is another common feature of Trecento and Quattrocento Madonna and Child iconography designed to entice the viewer's brain to imagine volume and shape which do not exist on the flat panel.<sup>41</sup> On the left hand side the angels provide further tactile prompts for the viewer by means of hand plays—one hand on the parapet, another one holding a crown, the thumb of which caresses a wing, four fingers holding the cartouche string and feeling the volume of the vase—and by means of their overlapping figures. As noted above for Donatello's *Dead Christ*, the figures' open mouths bring a sonic element to the image.<sup>42</sup> Indeed the vicinity of the Child's ear to the open mouth

*Invention and Fantasies of Personal Style*, Ann Arbor 1999. On Agostino's treatment of relief in the Tempio see Peta Motture's fine analysis in this volume, esp. pp.155–62.

- 41 This theme appears around 1280 in Duccio's work according to Stubblebine (as in fn.27), p.98.
- 42 See P. Motture, 'Making and Viewing: Donatello and the Treatment of Relief', in Curtis (as in fn.33), p.27.

of the Virgin suggests some vocal interaction. The small dimensions of the work (height 56.5 cm; width 50.8 cm) have been seen as an indication of its use in a private domestic setting.<sup>43</sup> Such images had an apotropaic function in the context of the rituals surrounding childbirth and were associated with the lowest type of meditation, intended for the laity and based on images.<sup>44</sup> In this context the specifically tactile treatments of the *Madonna and Child*, as much as its treatment in the new pictorial medium of relief sculpture, establishes one further layer of perception and meaning. Viewers are encouraged to imagine the most sensitive parts of the body's tactile map and are thereby reminded of their own sensory experience. This connection generates intensely three-dimensional mental images which in turn provide the basis for spiritual and devotional exercises.

## Conclusion

Entire walls of Assyro-Babylonian relief sculpture at the British Museum confirm that the Renaissance did not invent low relief sculpture. However, although such generalisations should always be taken with great caution, Assyrian reliefs seem to emphasise the arms of the warriors and gods they represent rather than their hands or faces.<sup>45</sup> The accentuation of these most sensitive parts in the genre of the *Madonna and Child* would seem to be related to the cultural context of late medieval religiosity, the roots of which go back to post-iconoclastic Byzantine iconography.

In this broad context perspective is only one means of indicating space. While Michael Baxandall related space in Quattrocento paint-

43 Ibid.

44 See G. Johnson, 'Art or Artefact? Madonna and Child Reliefs in the Early Renaissance', in *The Sculpted Object*, eds S. Currie and P. Motture, Aldershot 1997, pp.1–17 (at pp.8–9).

45 For a brief history of world relief sculpture see S. Mirabella, 'Relief Sculpture', in *The Encyclopedia of Sculpture*, ed. A. Boström, 3 vols, New York and London 2004, III, pp.1399–404.

ing to the contemporary proficiency in gauging volumes developed by Renaissance schooling,<sup>46</sup> low relief sculpture should alert us to another means by which Renaissance viewers apprehended depicted space. Tactility—gestures indicating the presence of sensed volume—served as hints and prompts to imagine the materiality of the figures themselves. These approaches can be usefully affiliated to two categories currently used in modern cognitive science: egocentric space, the perception of which depends on the position of the viewer; and allocentric space, that is the spatial relationship between visible objects, regardless of the viewer's position. These categories are usually exploited in the context of motion and spatial orientation. Here they provide a powerful analogy to the two principal means by which artists in the Renaissance expressed space: on the one hand the much studied phenomenon of perspective, which implies a relationship of continuity between the image and the viewer; on the other the neglected development of tactile space, based on the interaction of depicted figures inviting the audience to project its own experience of space into the picture.

46 See Baxandall (as in fn.5), pp.86–102.